



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,065	09/15/2003	Jian Dong	038190/294894	1939

826 7590 10/18/2006

ALSTON & BIRD LLP
BANK OF AMERICA PLAZA
101 SOUTH TRYON STREET, SUITE 4000
CHARLOTTE, NC 28280-4000

EXAMINER

PALADINI, ALBERT WILLIAM

ART UNIT PAPER NUMBER

2125

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/662,065

Applicant(s)

DONG, JIAN

Examiner

Albert W. Paladini

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-5 are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility.

The equations intended to describe the service load model referred to from pages 3 to 5 are expressed in terms of generalized variables. There are no clearly identifiable physical variables, which describe a service load. Variables identified are ψ_i (poles) and ψ_j (zeros). Normal distributions are mentioned NID with zero mean and variance δ , and the variable X_t is shown, but not described in terms of actual physical variables, which may be, used for real world prediction.

In the recursive formula on the bottom of page 5, none of the variables are explained. The background and summary section of the specification discusses vibration, service loads, thrust loads, testing time, acceleration rates, etc. None of the equations presented, including the recursive formulas on page 5 explain these equations in terms of practical, applied, measurable physical variables, which may be used to provide a service load. None of the equations result in creating a service load model, since none of the variables are expressed in physical units describing the magnitude of a load. The models do not result in "regenerating vibration load data" since none of the variables are clearly identified as vibration data in units which may be calculated.

Although the equations appear to have a frequency component, ω , there are no actual equations, which combine the variables to yield a predictable load model.

The equations presented are abstract equations, which may be normally be found in a text book including Fourier analysis, wave theory, complex variable theory, linear systems theory, etc, but they do not contain workable physical variables that result in a physical model.

If a general time series model is used to describe service loads, vibrations, accelerations, etc, then the variables of the models must be clearly defined, and result in physical values, which may be calculated.

This invention as described merely provides generalized abstract equations, and states that they may be used to generate "a high fidelity service load". There is no explanation of how this is accomplished in a real world environment.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

There is no methodology or systematic equations, which result in a calculation of "generating high fidelity service loads." The variables are not defined in physical terms and no units are given.

The specification does not provided the methodology for "combining multiple time series models", "adjusting the change of each of the time series models and creating an accelerated service load model", "regenerating random vibration load data", or "feeding the load data to a drive simulation system". These steps cannot be gleaned, learned, developed, or implemented from the general discussion and listing of abstract equations in the specification. No physical variables are defined, and the methodology is not provided.

Appropriate correction and clarification is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Dybel (4633720).

Although the instant invention lacks utility, is inoperable, and is not adequately described, this rejection was made by considering the recited goal and the clearly recited limitations, and locating a reference which achieves the goal.

In (C24, L4-18), Dybel discloses a method and system for predicting a load by generating a time series of numerical load values of an electrical signal over part of one operating cycle. The rejection cannot address the recited steps, which were not explained in the specification or clarified in the claim.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Kikuchi (6591620).

Although the instant invention lacks utility, is inoperable, and is not adequately described, this rejection was made by considering the recited goal and the clearly recited limitations, and locating a reference which achieves the goal.

In (C24, L24-48), Kikuchi discloses a method of using a time series model to predict or generate a load. It is inherent that a change in the time series data will result in a change of the load prediction. The limitations that were not supported or explained either in the specification or in the claims have not been addressed.

Relevant Prior Art

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Stuart (6639982) discloses the number of agents required to handle call volumes in a call center using time series analysis of historic data to estimate load values and calculates predictor values and uses these values in successive Erlang calculations to estimate the number of agents required for a service level.

Nagata (7039536) discloses a method of analyzing a source current waveform in a semiconductor integrated circuit, where parasitic capacitors are charged in a time series between the source and the ground, and a time division parasitic capacitor series model generating process calculates the sum of load capacitances to be charged in each segment and time interval.

Okamoto (7043102) discloses an optical fiber signal processing system, where a signal-processing segment extracts the desired optical correlation from a signal in time series obtained from an optical sensor, and the load applied to a Fabry-Perot load cell is obtained by the gap clearance size caused by a deformed diaphragm.


Art Unit: 2125

9. Any inquiry concerning this communication or earlier communication from the examiner should be direct to Albert W. Paladini whose telephone number is (571) 272-3748. The examiner can normally be reached from 7:00 to 3:00 PM on Monday, Tuesday, Thursday, and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Leo P. Picard, can be reached on (571) 272-3749. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

October 16, 2006


Albert W. Paladini
Primary Examiner
Art Unit 2125